



FOOD POISONING: LISTERIA AND LISTERIOSIS

**RESPONSE OF THE GOVERNMENT TO THE SIXTH
REPORT (1988-89) FROM THE SOCIAL SERVICES
COMMITTEE**

**Presented to Parliament by the Secretary of State for
Health and the Minister of Agriculture, Fisheries and Food
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Introduction

1. This memorandum sets out the Government's response to the Sixth Report of the Social Services Committee, HC 257, Session 1988-89, on food poisoning: listeria and listeriosis.
2. The Government welcomes the Committee's examination of the trends in food poisoning and, in particular, listeriosis. The Government has taken action on many of the recommendations.
3. The Government is concerned that some of the Committee's conclusions appear to be based on incorrect scientific interpretations of the evidence (Conclusions 2 and 7) or on evidence which was not available at the material time (Conclusion 16). The Government has been working with all interests including the medical profession and food industry since the end of 1987 to assess and decide how best to deal with potential hazards from *Listeria monocytogenes* (Lm) as evidence of cases of listeriosis linked to contamination of food emerged in Europe.
4. The Government's policy has been to initiate action based on established facts as soon as they have emerged and as soon as it is clear what the most appropriate action is. This same policy has been followed when deciding on the need for advice to be given to the public. The Government will continue to monitor evidence on the risk of food poisoning from whatever source and to take the appropriate legislative and other action as soon as it is appropriate.
5. The Government has encouraged and assisted the relevant sections of the food industry to prepare codes of practice in respect of the manufacture of soft and fresh cheese (August 1988 and February 1989*). Similar industry guidelines for good hygienic practice in the manufacture, distribution and sale of foods to be eaten cold or after reheating, which will subsequently be stored at a chill temperature, are nearing completion. Meanwhile the Department has been taking expert advice on the need for and the form of legislation required in this area and is now considering the result of consultation on draft regulations to control the temperature of these foods in distribution and retail sale.
6. The Government's response to the Committee's detailed recommendations and conclusions is set out below.

Food Poisoning

Conclusion 1. *We are disturbed by the apparent increase in food poisoning and listeriosis and the uncertainty which seems to have arisen regarding the safety of various food products* (para 2)

Conclusion 2. *The upward trend in food poisoning is almost entirely due to the increase in salmonella* (para 6)

*Guidelines for Good Hygiene Practice in the Manufacture of Soft and Fresh Cheeses—published August 1988. The Milk Marketing Board, Thames Ditton, Surrey KT7 0EL.

Guidelines for Good Hygienic Practice for the Manufacture of Soft and Fresh Cheeses in Small and Farm-based Production Units—published February 1989. The Creamery Proprietors' Association, 19 Cornwall Terrace, London NW1 4QP.

7. The Government shares the Committee's concern over the upward trend in food poisoning but does not agree that it is almost entirely due to an increase in salmonella. The increase is almost equally shared between reports of salmonellosis and of campylobacter. As far as the former is concerned the recent increase is mainly due to a single strain of *Salmonella enteritidis* (PT4). The Committee will be aware of the range of measures taken before and after its enquiry to deal with that particular problem which, in cases when it has been possible to determine the cause, has been traced mainly to the consumption of contaminated eggs and chicken. In his evidence, the Chief Medical Officer also drew attention to the upward trend in reports of campylobacter infection which, as the Committee points out, rose from 12,878 in 1982 to 28,714 in 1988. Between 1982 and 1988 salmonella enteritidis PT4 and campylobacter together accounted for the vast majority of reported food poisoning cases.

8. Preliminary results for salmonella enteritidis PT4 isolations for 1989 suggest that educational measures affecting catering practices in and outside the home, and the various Government measures, could now be beginning to have an effect on the number of human infections. These trends will need to be sustained for some time, and particularly through the Summer of 1990, before any firm conclusions can be made.

Recommendation 3. In cases of miscarriage and stillbirth listeriosis is not routinely looked for: we recommend that it should be (para 7)

9. Following the Department's public warning about listeria contamination of Swiss Vacherin Mont d'Or cheese and its withdrawal by the Swiss Government, the Department drew the attention of the Royal College of Obstetricians and Gynaecologists to the possibility that there was under-reporting of listeriosis as a cause of miscarriage. We believe that the subsequent interest in this subject will have served to remind clinicians of the need to consider this possible diagnosis. Furthermore, the Chief Medical officer wrote to all doctors on 16 February 1989 giving clinical advice and reminding them that the risk of listeriosis in pregnancy, although small (1 in 7000), was much greater than among the remainder of the healthy population. In its planning objectives for the NHS for 1989-90, the Government has required the Regional Health Authorities to ensure the appointment of at least one paediatric pathologist per region.

Conclusion 4. Most cases of food poisoning are preventable (para 16)

10. The Government agrees and is taking all possible steps both to deal with sources of contamination and to give advice to the public where necessary. However, as the Committee has pointed out, although it is now widely agreed that in the case of listeriosis "The primary means of transmission of listeria to humans is thought to be through contamination of foodstuffs at any point in the food chain" (para 13 of Sixth Report) it remains unclear what proportion of cases originate directly from food, which foods are involved and what determines whether or not an infection with *Lm* leads to illness. It must be borne in mind that it is estimated that at least 1 in 20 of the population carry *Lm* within their gut at any one time and only a very small minority of these ever manifest symptoms of illness. *Lm* is almost ubiquitous in samples of soil, vegetation etc and a wide range of foodstuffs are contaminated with it, yet listeriosis is a rare disease.

Conclusion 5. The risks of food poisoning generally and listeriosis in particular cannot be quantified exactly. The risks of a healthy person contracting listeriosis are small. For those who fall into one of the at risk groups, women who are pregnant, the elderly and people with impaired immune systems, there may be some dangers involved in eating certain types of food. But we are convinced that these risks can be controlled and kept to a minimum if proper procedures are followed (para 17)

11. The Government agrees that all reasonable steps should be taken to minimise the contamination of food by *Lm* during food processing and handling to ensure that foods consumed by the public are free of *Lm*. Codes of practice for the production of foods which are particularly liable to contamination with *Lm*

have been agreed in respect of soft and fresh cheeses, and a code in respect of pre-cooked chilled meals is nearing completion. Formal consultation has been completed on proposals to control, by regulation, the temperature at which these foods are distributed, stored and sold. The Government recently published advice for the consumer in the leaflet, "Food Safety—Food Sense" which has been widely distributed.

Listeria in food

Conclusion 6. *On the limited information available, cook-chill meals prepared for hospital consumption appear relatively safe. Although this provides some reassurance, we believe that further monitoring of hospital catering is required* (para 20)

12. The updated guidelines, "Chilled and Frozen: Guidelines on Cook Chill and Cook Freeze Catering Systems", published on 22 June 1989, has a chapter on management of quality assurance which recommends a strict monitoring system based on hazard analysis and includes essential control checks and microbiological guidance. We have asked Regional Health Authorities to implement the guidelines and report back on their programmes of implementation by December 1989. When we have received this information we will then consider what further monitoring of their cook chill systems is required.

Conclusion 7. *The evidence suggests that contamination of soft cheeses by listeria occurs post-production and is derived from environmental sources* (para 21)

13. There is evidence that contamination of soft cheeses with Lm may occur either before, during or after production. In view of their long shelf life, soft cheeses at point of sale may contain high levels of Lm. Because these cheeses are usually consumed uncooked, it is crucial that action be taken to control temperatures at which they are kept at all stages and the proposed Food Hygiene Regulations on which the Government has consulted, are intended to ensure this.

Conclusion 8. *Cook chill products which are reheated before consumption may still present a risk to the consumer if the product is contaminated with Lm. The risks are twofold. First, cross-contamination may occur in the kitchen if the infected product is brought into contact with other foods, or if poor hygiene practices are followed; second, if the food is not heated to and held long enough at a sufficiently high temperature then some bacterial contamination may remain* (para 24)

14. The Chief Medical Officer's advice of 10 February 1989, aimed particularly at the vulnerable groups, was that the latter should avoid the consumption of certain types of soft cheeses and reheat cooked chilled meals and ready-to-eat poultry until they are piping hot. The advice included a plain man's guide to hygienic practices which would help to avoid cross-contamination. The Government has also expanded this in the food safety leaflet referred to earlier. The Ministry of Agriculture, Fisheries and Food identified a potential problem with microwave ovens and has issued interim advice to consumers on the preparation of foods in microwave ovens so as to avoid the risks associated with under-cooking. It has also commissioned research into the problem.

Food Safety

Recommendation 9. *Whilst responsibility for food safety does not only rest with Central Government, the Government should take the lead and take all reasonable steps to ensure food safety issues are given priority* (para 28)

15. The Government fully accepts that it should take the lead in giving priority to food safety issues. The Government has acted promptly on the advice it has received and is taking a range of measures to ensure food safety in the longer term:

- it has introduced a comprehensive and wide-ranging package of measures to control the problem associated with salmonella and eggs;
- it has issued a leaflet to the public giving general food safety guidance on safe storage and cooking procedures. It has also, as the occasion demands, issued advice on foods which people at special risk should avoid;
- it set up the Working Party on Bovine Spongiform Encephalopathy and acted quickly on its recommendations;

- it has established an independent committee to consider the microbiological safety of food;
- it has reviewed and revised the guidelines on cook-chill and cook-freeze catering and these have recently been published;
- it has reviewed primary food legislation and has already stated its intention to introduce a Food Bill as soon as Parliamentary time permits;
- it has consulted on proposals to amend Food Hygiene Regulations so as to apply temperature controls to certain food in distribution and at retail sale;
- it acted promptly to control the recent outbreak of botulism due to contaminated hazelnut yoghurt;
- it acted promptly to give advice on the risks from listeria in pate.

Conclusion 10. It is essential that Government policies on issues associated with food safety and hygiene are co-ordinated (para 29)

Recommendation 11. We recommend that an inter-departmental committee of ministers and officials from all the relevant departments should be established to review food safety issues, consider any action that may be necessary, and ensure that the objectives of different Departmental policies do not conflict (para 29)

16. The Government agrees on the importance of co-ordination between Departments. The measures set out above, and many others, have been handled with full co-operation between Departments at Ministerial and official level. There are well established mechanisms for obtaining the advice of experts and for this information to be shared. Apart from joint membership and servicing of standing committees, major issues are reviewed inter-departmentally so as to co-ordinate the assessment of information and the necessary action. This ranges from routine joint Ministerial discussion (meeting the Committee's recommendation for an inter-departmental committee of Ministers and officials) to daily contacts between officials.

Recommendation 12. In view of the recent misunderstandings surrounding food hygiene and food surveillance and the deficiencies of existing regulations and guidelines, we recommend that the Government acts promptly and brings the Food Bill before the House in the next Parliamentary session (para 38)

17. The Government has already stated its intention of bringing a new Food Bill before Parliament at the earliest opportunity. This will reinforce existing legislative powers to enable UK food law to deal with future food control requirements and will improve the enforcement powers of local authorities. It will seek powers to require the training of foodhandlers, building on the training already provided by industry and other bodies, and allowing local authorities to provide it where necessary.

Recommendation 13. We recommend that the Richmond Committee considers scientific evidence, the views and needs of consumers, and current policies and practice of food safety issues followed by different groups (farmers, manufacturers, distributors, caterers etc) and makes recommendations to the Government as soon as possible (para 39)

18. The Committee on the Microbiological Safety of Food chaired by Sir Mark Richmond said in a Press Statement that it would make its first report to Ministers as soon as possible and probably towards the end of 1989. The Committee's recommendations have been brought to the attention of the Richmond Committee.

Recommendation 14. We recommend that the Richmond Committee plays a key role in the preparation of the proposed Food Bill (para 39)

Conclusion 19. We expect that the Richmond Committee will look in detail at the issue of food storage and refrigeration temperatures (para 46)

Recommendation 32. *We recommend that one of the tasks of the Richmond Committee should be to oversee research in the field of food hygiene and food safety, to consider the balance of funding and make recommendations accordingly* (para 74)

19. Sir Mark Richmond has been asked by Ministers to let them know in advance of his report of possible recommendations which might affect the proposed Food Bill. The Government would expect the Richmond Committee to include research among the matters it considers. The Government's proposed regulations on food storage and refrigeration temperatures, were also referred to the Richmond Committee during the consultation process.

Conclusion 15. *Too much information issued to the public on food safety and hygiene has come out in dribs and drabs. The Department of Health should have taken a more proactive stance* (para 42)

26. At the time of the Select Committee Report the Government had issued advice on listeriosis on three occasions: November 1987, February 1988 and February 1989. The first two occasions related to the need to publicise the withdrawal of two specific cheeses which had been linked to cases of listeriosis: Vacherin Mont d'Or and Anari. The timing of the two warnings was determined by the identification in each case of a specific problem related to a particular cheese which was outside the Government's control.

27. The third warning, in February 1989, gave *general* advice on the implications of listeria contamination of food, reassured the general public and identified the need for special care to be taken by susceptible groups with respect to certain general categories of food, ie certain soft cheeses and cook chilled meals and ready-to-eat poultry. The timing of this warning was determined by the expected publication of the results of the Public Health Laboratory Service (PHLS) survey of cooked poultry and chilled meals, and by a re-evaluation of the position in the light of evidence which had become available in 1988 (see below).

28. Since the Select Committee Report was published the Department has issued two further press releases on listeria in pate. The first, in July 1989, related to pate in which a local survey had identified listeria. It warned pregnant women and susceptible groups to avoid this product while the PHLS carried out a national survey. The second, in August 1989, reported the results of the PHLS survey and reiterated the need for these special groups to avoid pate.

29. When deciding on the need to issue any advice a balance has to be struck between the need to warn of a potential health hazard as soon as information becomes available and the need to verify the facts and their implications. The Government believes that each of these Press Notices was necessary to enable it to discharge its responsibility for safeguarding the health of the public.

Conclusion 16. *We believe that pregnant women could have been alerted to possible hazards far sooner* (para 42)

30. The Government disagrees strongly with the opinion of the Select Committee on this question and does not believe that the Committee had any factual basis for their assertion. The expert scientific advice available to the Government's Chief Medical Officer did not support the need for a warning to pregnant women and other vulnerable groups before February 1989. The evidence on which the advice was based was as follows:

1. The reports in November 1988 of the first two cases of fetal listeriosis within the UK linked to food (respectively linked to cooked and chilled chicken and vegetable rennet).

2. The results of a PHLS survey (carried out at the Government's request) of the prevalence of Lm in ready-to-eat poultry and cooked and chilled meals. The results, which became available in January 1989 showed that Lm was present in between 10 to 20 per cent of the samples of pre-cooked ready-to-eat poultry and cooked and chilled or frozen meals purchased from retail premises. Prior to 1988, evidence about Lm in poultry had been limited to information on contamination of raw carcasses.

3. The publication in *The Lancet* in October 1988 of an American study which provided the first epidemiological evidence that in the USA at least a substantial proportion of sporadic (ie non-outbreak-related) of listeriosis might be foodborne.

31. In December 1987, there was no scientific consensus to support the view that the evident increase in cases of listeriosis was due to the consumption of contaminated food or that a general warning to the public or to pregnant women was necessary. Although a survey of soft cheeses conducted by the PHLS published in February 1988 showed that about 10 per cent of soft cheeses sampled in the UK contained Lm, the predominant serotype did not match that in human cases and the significance of the findings to human listeriosis was at that time uncertain. During 1988 it emerged that, as well as the well-defined outbreaks such as that due to Swiss Vacherin Mont d'Or cheese, some sporadic human cases of listeriosis (including materno-fetal listeriosis) could also be due to contaminated food. This view was supported by the evidence outlined above and the Report of a WHO Informal Working Group on Foodborne Listeriosis.

Recommendation 17. Coroners and pathologists may examine for the presence of Lm in the post-mortems of stillbirths or neonatal deaths, but it is still not a routine practice. We recommend that it should be (para 43)

32. The Committee draws attention to the need to keep under review the reporting arrangements for food poisoning. This has already been identified in the report entitled "Public Health in England" which also recommended that the list of notifiable diseases should be reviewed. This review is under way. When new regulations are made the Government intends to draw these to the attention of health authorities and doctors in order to encourage a higher proportion of cases of notifiable diseases to be reported, and will consider the need to advise coroners and pathologists.

Recommendation 18. We recommend that the current arrangements for reporting listeriosis through the PHLS are kept under review to ensure that the information upon which preventive and control policies are based is as full and as accurate as possible (para 45)

33. The Government agrees with the Committee's view on this. The PHLS is currently restructuring its reporting, information and analysis systems.

Recommendation 20. We recommend that all commercial refrigerators be fitted with a thermometer, that households seriously consider purchasing a suitable thermometer and that all new refrigerators be fitted with thermometers (para 46)

34. The Government's food safety leaflet advises householders to store food in the refrigerator below 5°C, and to buy a fridge thermometer to check this. The Government has consulted on proposals to regulate the temperature at which chilled foods are stored and displayed for retail sale. Many commercial display cabinets already have thermometers and it seems likely that all will need to do so when the proposed regulations have effect. The positioning of sensors is important and this is under discussion with the manufacturers. Manufacturers have also shown some willingness voluntarily to design new ranges to include integral thermometers.

Recommendation 21. We recommend that the Department lower the critical safety limit in storage from 10°C to 4°C (para 51)

35. The Committee has made this recommendation in the context of NHS catering and cook-chill in particular. The 1980 Guidelines on pre-cooked chilled food (in catering) said a temperature of +10°C should be regarded as the critical safety limit for chilled food. The updated Guidelines on Cook-Chill and Cook-Freezing Catering Systems no longer use that expression. The 1989 guidelines say that the temperature of cooked food after chilling should be maintained at or below 3°C; if the temperature of the food during storage and distribution exceeds 5°C the food should be used within 12 hours; if the temperature exceeds 10°C the food should be destroyed. These tolerances are intended to allow for

unavoidable increases in temperature, for example during defrost cycles, and the system is based on an intention to store and distribute at or below 3°C before reheating.

Recommendation 22. We recommend that the Government extends the application of the DHSS guidelines on the preparation and storage of cook-chill meals to the retail and catering sectors (para 52)

36. The proposed amendment of the Food Hygiene Regulations will have a substantial impact on the handling of chilled foods on retail sale. Recent surveys have indicated both that Lm may be present in a wide range of foods and that such foods are often distributed, stored and/or displayed for sale at temperatures which would not necessarily restrain the further multiplication of these and other pathogenic organisms. The draft regulations result from extensive expert advice and wide consultation and, we believe, will be more appropriate than guidelines. Guidelines for good hygienic practice in the manufacture, distribution and sale of foods, to be eaten cold or after reheating, which will subsequently be stored at a chill temperature, are nearing completion by industry with the assistance of the Department and the Ministry. Those on the safe production of soft and fresh cheese have already been produced. The Government does not accept that the cook-chill guidelines are appropriate for application to the distribution and display of retail foods. They are designed for cook-chill catering systems both within the NHS and elsewhere.

Recommendation 23. There should be greater freedom in the exchange of information on matters relating to public health between statutory bodies to enable problem areas to be identified and effective solutions to be devised (para 57)

37. There are working arrangements in place between appropriate statutory bodies on relevant public health matters. Close relationships exist between the Department of Health (DH) and the Institution of Environmental Health Officers (IEHO). Working parties exist on specific issues, for example, inspection guidelines for cook chill central production units with membership drawn from DH, the IEHO, health authorities and local authorities. These activities encourage exchange of information and this is ongoing.

Recommendation 24. We recommend that the Government ensures that local authorities have sufficient funds and qualified staff to fulfil their important role in monitoring and enforcing food hygiene legislation (para 58)

38. The Government recognises the importance of monitoring and enforcement of food hygiene legislation. Discussions have been held with local authorities on the monitoring and enforcement implications of the proposed Food Bill. The Government has already stated its intention of bringing a new Food Bill before Parliament at the earliest opportunity.

Recommendation 25. We recommend that the Government reviews the powers of EHOs in the field of food hygiene in the preparation of the forthcoming Food Bill (para 58)

39. A review of primary legislation has been under way since December 1984 and the Government has already said that it will bring legislation before Parliament as early as possible. There has been extensive consultation with enforcement interests and it is expected that the Food Bill will reinforce existing legislative powers in food hygiene.

Recommendation 26. We recommend that the Government takes the existing practice of good employers in screening, treatment and training in food handling as the basis for a code of practice (para 61)

40. Many good employers undertake health checks before employment. This is part of occupational health services provided by employers and, whilst not an explicit requirement under Health and Safety at Work legislation, may well be necessary to meet the duty of an employer to safeguard the health of employees and of those members of the public who may be affected by the work. The proposed Food Bill will seek powers to require the food hygiene training of food handlers.

Recommendation 27. *In view of the possible confusion which may arise over different types of labeling and storage instructions, we recommend that the Department of Health and MAFF ensure that the term "sell by" is phased out as soon as possible and is replaced with labelling more easily understood by consumers. The terms "use by" or "eat by" should be used wherever possible (para 65)*

41. The Government agrees. The UK law implements the EC Directive. In June, the Internal Market Council adopted a directive which amends the Food Labelling directive (79/112/EEC) to require, inter alia, the phasing out of the term "sell by" by 1993 and the introduction of a compulsory "use by" date for highly perishable foods. Once the directive has been implemented into UK law and takes effect there will be two sorts of date-mark: "best before" which will apply to most foods and "use by" for the highly perishable foods. We believe that these give clear advice to consumers. There is no change in the requirement that any special storage conditions or conditions of use must be given.

Recommendation 28. *We recommend that if contamination of soft cheese products is to be avoided, or contaminated products prevented from reaching the consumer, consistent quality must be ensured by regular bacterial monitoring of products (para 66)*

42. Quality is best ensured by adherence to good manufacturing practices and not by end product testing. The codes of practice produced by the industry, with the assistance of Government, are designed to eliminate contamination during production and the proposed regulations on temperature control will apply during distribution, storage and display for retail sale.

Conclusion 29. *Irradiation is no substitute for good food hygiene practices (para 69)*

43. The Government is in complete agreement with this observation. The arrangements proposed for food irradiation in this country include provision for the examination of food prior to treatment—and it will be a condition of a Licence to operate an irradiating plant that only food of normal, sound acceptable quality shall be irradiated.

Recommendation 30. *We recommend that the Government reassesses its policy to withdraw funding from agricultural and food research in the "public good" and ensures that such research is continued and centrally funded, even when it falls into the category of "near market" research (para 73)*

44. The Government does not have a policy of withdrawing funding from agricultural and food research in the public good. Public expenditure plans indicate that the Government will continue to spend over £200 million a year on agricultural and food research when support for "near market" research is phased out in 1991/92. The withdrawal of public funding for commercial research related to the needs of the industry—"near market" research—does not affect our commitment to research of direct relevance to issues such as food safety or protection of the environment wherever such work falls in the R and D continuum. But in our view industry itself is best placed to fund and decide on priorities for purely commercial orientated research.

Conclusion 31. *We would not wish to see research on issues of food safety and food hygiene dominated by the interests of the food industry alone (para 74)*

45. Public sector food safety and food hygiene research is not dominated by the interests of the food industry. On the contrary this research is determined by Ministers acting in the public interest. Advice from scientists in the academic world, in research institutes, industry and consumer organisations is taken into account in determining the priorities.

Recommendation 33. *More epidemiological research should be commissioned by the Department of Health. The incidence of, and factors associated with, listeria in stillbirths and neonatal deaths is one area for further investigation (para 75)*

46. A number of projects on the epidemiology and microbiology of listeriosis are being undertaken by the PHLS which is funded by DH. The PHLS is proposing to undertake an extensive case control study; they are also developing monoclonal antibodies and using molecular biological techniques to assist in epidemiological tracing; monoclonal antibody is also being used for antigen detection and for rapid identification of listeria. Proposals for a study on listeriosis in pregnancy which may provide further information on the prevalence of infection with Lm in pregnancy, the natural history of the disease during pregnancy, the possible relevance of dietary factors and the relationship between infection with Lm and spontaneous abortion and perinatal death are being considered.